

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P831091

Luminaire Tested: S123DIP-S1000D1195U935-4F0-1E-UDD-G1

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P831091
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-1, G3-1807-864-9)
Test Lab: INNOVATION CENTER
Issue Date: 05/03/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123DIP-S1000D1195U935-4F0-1E-UDD-G1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 1195 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: -

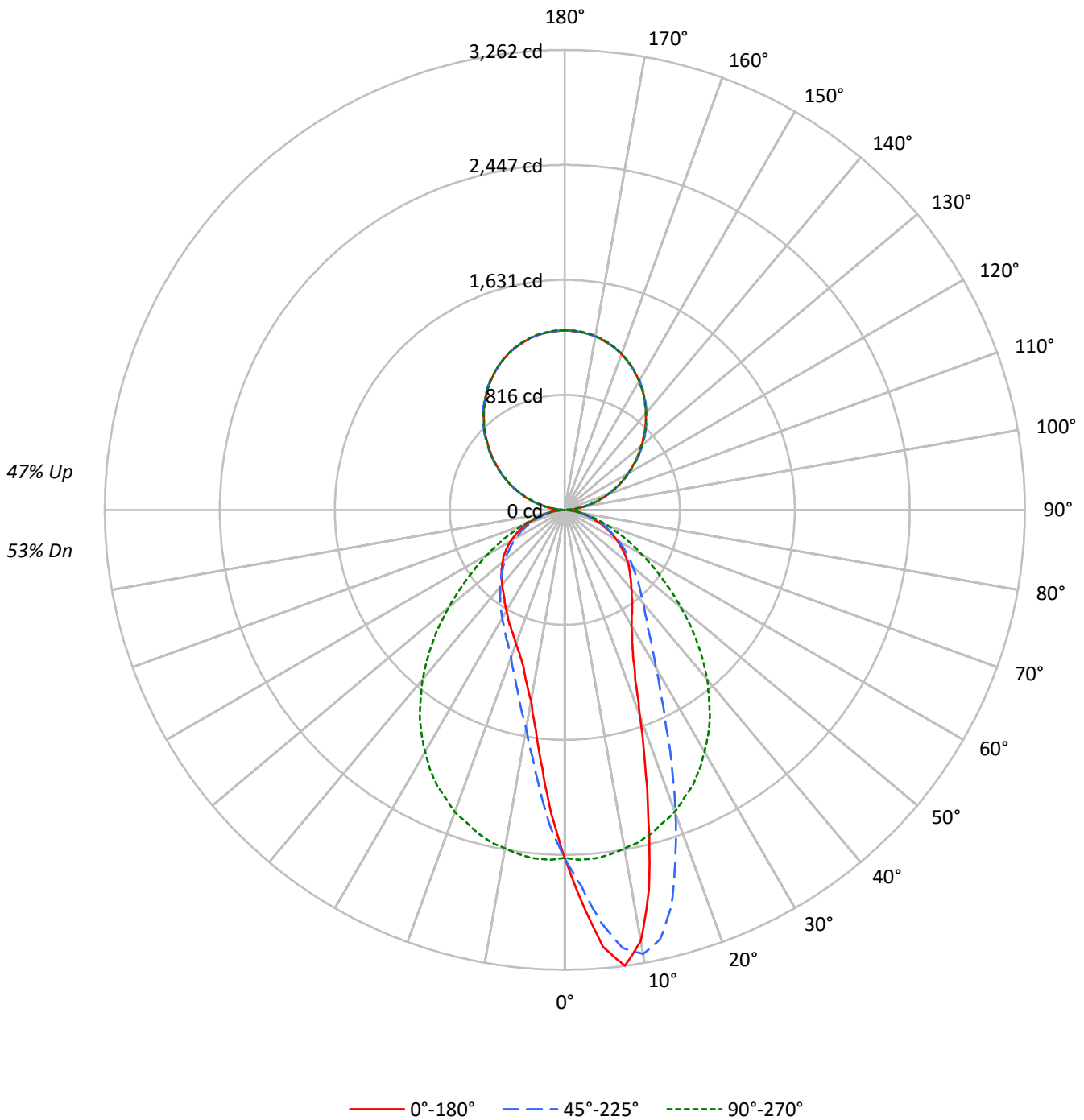
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7500.6 lumens
Efficiency: N/A
Efficacy: 113.5 lumens/watt
Spacing Criteria (0/90/45): 0.65 / 1.19 / 0.89
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 66.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					20	
RC	80					70					50					30					10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0	
RCR																						
0	108	108	108	108	100	100	100	100	85	85	85	71	71	71	59	59	59	53				
1	99	95	91	88	92	88	85	82	75	73	71	64	62	60	53	52	51	46				
2	91	84	78	73	84	78	73	68	67	63	60	57	54	51	47	45	44	39				
3	83	74	67	61	77	69	63	58	59	55	51	51	47	44	42	40	38	34				
4	76	66	58	53	71	62	55	50	53	48	44	46	42	39	38	36	33	30				
5	70	59	51	46	65	55	48	43	48	43	39	41	37	34	35	32	30	26				
6	65	54	46	40	60	50	43	38	44	38	34	38	33	30	32	29	26	24				
7	61	49	41	36	56	46	39	34	40	34	30	35	30	27	30	26	24	21				
8	56	44	37	32	52	42	35	30	37	31	27	32	28	25	27	24	22	19				
9	53	41	34	29	49	38	32	27	34	29	25	30	25	22	26	22	20	18				
10	49	38	31	26	46	36	29	25	31	26	23	28	23	20	24	21	18	16				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	26579	26579	26579	26579	26579
5°	33613	31726	26817	21610	19859
10°	33940	34967	26639	17227	15054
15°	25563	32465	26457	14588	12730
20°	17811	26270	26119	12757	11564
25°	13581	20202	25543	11738	10846
30°	11749	16051	24623	11016	10268
35°	10901	13550	23563	10494	9862
40°	10321	12156	22073	9999	9725
45°	9977	11251	20180	9611	9663
50°	9805	10535	17941	9259	9614
55°	9439	10010	15739	8923	9655
60°	9102	9449	13567	8609	9496
65°	8550	8917	11703	8273	9309
70°	7896	8239	9951	7717	8762
75°	7149	7386	8530	7170	8006
80°	5895	6465	6750	6248	6750
85°	4668	5236	4952	5311	5372

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 23041 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	233.4	3.1
10°-20°	580.8	7.7
20°-30°	687.6	9.2
30°-40°	691.4	9.2
40°-50°	634.3	8.5
50°-60°	523.6	7.0
60°-70°	370.4	4.9
70°-80°	197.7	2.6
80°-90°	52.9	0.7
90°-100°	82.0	1.1
100°-110°	248.1	3.3
110°-120°	422.4	5.6
120°-130°	555.7	7.4
130°-140°	624.6	8.3
140°-150°	614.1	8.2
150°-160°	517.0	6.9
160°-170°	344.2	4.6
170°-180°	120.5	1.6
0°-30°	1501.8	20.0
0°-40°	2193.3	29.2
0°-60°	3351.2	44.7
0°-90°	3972.1	53.0
90°-120°	752.5	10.0
90°-150°	2546.9	34.0
90°-180°	3529.0	47.0
0°-180°	7500.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2469	2469	2469	2469	2469	
5°	3111	2936	2482	2000	1838	296
15°	2294	2913	2374	1309	1142	634
25°	1144	1701	2151	988	913	540
35°	830	1031	1793	799	750	521
45°	655	739	1326	631	635	508
55°	503	533	839	476	514	450
65°	336	350	460	325	366	334
75°	172	178	205	172	192	181
85°	38	42	40	43	44	42
90°	30	24	1	24	30	17
95°	78	74	59	74	78	78
105°	238	236	225	236	238	252
115°	426	426	425	426	426	422
125°	615	623	622	623	615	550
135°	806	812	807	812	806	620
145°	979	984	979	984	979	612
155°	1119	1122	1121	1122	1119	516
165°	1218	1218	1222	1218	1218	344
175°	1266	1266	1270	1266	1266	120
180°	1274	1274	1274	1274	1274	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2469.3	2469.3	2469.3	2469.3	2469.3	2469.3	2469.3	2469.3	2469.3	2469.3	2469.3
2.5°	2783.2	2780.4	2777.5	2763.2	2748.8	2742.0	2735.1	2714.5	2693.8	2670.9	2648.0
5°	3110.9	3119.0	3127.0	3117.8	3108.6	3080.6	3052.5	3015.3	2978.0	2936.2	2894.4
7.5°	3262.2	3266.8	3271.3	3265.6	3259.9	3252.4	3245.0	3211.8	3178.5	3135.6	3092.6
10°	3105.2	3115.5	3125.8	3148.2	3170.5	3195.7	3220.9	3216.3	3211.8	3199.2	3186.6
12.5°	2760.3	2772.9	2785.5	2830.2	2874.9	2932.2	2989.5	3038.7	3088.0	3122.4	3156.8
15°	2294.0	2328.9	2363.8	2404.5	2445.2	2529.4	2613.6	2717.3	2821.0	2913.3	3005.5
17.5°	1889.5	1902.7	1915.8	1959.4	2002.9	2108.9	2214.9	2334.6	2454.4	2607.3	2760.3
20°	1554.9	1566.9	1579.0	1636.2	1693.5	1776.6	1859.7	1994.3	2129.0	2293.4	2457.8
22.5°	1306.2	1325.2	1344.1	1376.1	1408.2	1487.9	1567.5	1687.2	1807.0	1988.6	2170.2
25°	1143.5	1157.3	1171.0	1190.5	1210.0	1273.6	1337.2	1435.7	1534.3	1701.0	1867.7
27.5°	1032.4	1038.1	1043.9	1063.3	1082.8	1124.1	1165.3	1250.1	1334.9	1476.4	1617.9
30°	945.3	949.3	953.3	970.5	987.7	1015.8	1043.9	1105.2	1166.5	1291.4	1416.2
32.5°	884.6	887.4	890.3	903.5	916.7	936.7	956.8	1001.5	1046.1	1149.3	1252.4
35°	829.6	831.3	833.0	842.8	852.5	867.4	882.3	916.1	949.9	1031.2	1112.6
37.5°	781.5	783.7	786.0	791.8	797.5	810.7	823.9	850.8	877.7	940.2	1002.6
40°	734.5	738.5	742.5	746.5	750.5	761.4	772.3	792.9	813.5	865.1	916.7
42.5°	694.4	698.4	702.4	704.1	705.8	712.1	718.4	737.3	756.2	794.6	833.0
45°	655.4	657.1	658.9	660.6	662.3	667.4	672.6	689.2	705.8	739.1	772.3
47.5°	619.9	619.9	619.9	621.0	622.2	626.8	631.4	643.4	655.4	681.2	707.0
50°	585.5	585.5	585.5	583.8	582.1	584.9	587.8	597.0	606.1	629.1	652.0
52.5°	544.3	544.3	544.3	544.8	545.4	545.4	545.4	553.4	561.5	582.1	602.7
55°	503.0	505.3	507.6	505.9	504.2	505.3	506.5	511.6	516.8	533.4	550.0
57.5°	461.8	462.9	464.1	463.5	462.9	463.5	464.1	468.6	473.2	485.8	498.4
60°	422.8	422.8	422.8	421.7	420.5	421.7	422.8	425.1	427.4	438.9	450.3
62.5°	379.3	379.8	380.4	381.0	381.6	380.4	379.3	382.1	385.0	393.6	402.2
65°	335.7	336.3	336.9	338.6	340.3	339.2	338.0	340.9	343.7	350.1	356.4
67.5°	296.8	295.6	294.5	295.1	295.6	297.3	299.1	299.6	300.2	307.1	314.0
70°	250.9	252.1	253.2	252.7	252.1	252.7	253.2	254.9	256.7	261.8	267.0
72.5°	209.7	210.3	210.8	210.8	210.8	212.0	213.1	214.8	216.6	219.4	222.3
75°	171.9	171.9	171.9	173.0	174.2	174.7	175.3	175.3	175.3	177.6	179.9
77.5°	130.6	133.5	136.4	135.8	135.2	136.4	137.5	139.2	140.9	142.1	143.2
80°	95.1	95.1	95.1	95.7	96.2	98.0	99.7	100.8	102.0	104.3	106.6
82.5°	60.7	61.3	61.9	63.6	65.3	66.5	67.6	69.3	71.0	71.0	71.0
85°	37.8	36.7	35.5	36.7	37.8	39.0	40.1	40.7	41.2	42.4	43.5
87.5°	18.3	18.3	18.3	18.3	18.3	18.9	19.5	19.5	19.5	19.5	19.5
90°	30.0	29.6	29.1	28.7	28.2	27.6	26.7	25.8	24.9	24.0	21.1
92.5°	43.0	43.5	43.9	44.4	44.8	44.7	44.0	43.3	42.7	42.0	40.7
95°	78.0	78.0	78.0	78.0	78.0	77.6	76.7	75.8	74.9	74.0	72.2
97.5°	112.0	112.3	112.5	112.7	112.9	112.5	111.4	110.3	109.2	108.0	106.7
100°	152.1	151.6	151.2	150.7	150.3	149.7	149.1	148.4	147.7	147.1	145.9
102.5°	193.1	193.3	193.5	193.7	194.0	193.7	193.1	192.4	191.7	191.1	189.5
105°	238.1	237.6	237.2	236.8	236.3	236.1	236.1	236.1	236.1	236.1	234.1
107.5°	284.1	284.3	284.6	284.8	285.0	284.8	284.1	283.4	282.8	282.1	281.2
110°	331.1	331.6	332.0	332.5	332.9	332.7	331.8	330.9	330.0	329.1	328.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	381.1	381.1	381.1	381.1	381.1	380.6	379.5	378.4	377.3	376.1	376.1
115°	426.2	426.4	426.6	426.8	427.1	427.1	426.8	426.6	426.4	426.2	426.6
117.5°	472.2	472.8	473.5	474.2	474.8	475.2	475.2	475.2	475.2	475.2	475.6
120°	521.2	521.6	522.1	522.5	523.0	523.3	523.5	523.8	524.0	524.2	525.3
122.5°	568.2	568.9	569.5	570.2	570.9	571.5	572.2	572.9	573.5	574.2	574.7
125°	615.2	616.1	617.0	617.9	618.8	619.7	620.6	621.5	622.3	623.2	623.7
127.5°	662.2	663.1	664.0	664.9	665.8	666.9	668.3	669.6	670.9	672.3	672.7
130°	708.3	709.8	711.4	712.9	714.5	715.7	716.6	717.5	718.4	719.3	719.9
132.5°	756.3	757.4	758.5	759.6	760.7	761.8	763.0	764.1	765.2	766.3	766.7
135°	806.3	806.7	807.2	807.6	808.1	808.7	809.6	810.5	811.4	812.3	812.5
137.5°	850.3	851.0	851.7	852.3	853.0	853.9	855.0	856.1	857.2	858.3	857.7
140°	893.3	894.9	896.4	898.0	899.6	900.5	900.7	900.9	901.1	901.3	901.1
142.5°	937.4	938.5	939.6	940.7	941.8	942.5	942.7	942.9	943.1	943.4	942.9
145°	979.4	980.3	981.1	982.0	982.9	983.5	983.7	983.9	984.1	984.4	983.7
147.5°	1017.4	1018.7	1020.1	1021.4	1022.7	1023.4	1023.4	1023.4	1023.4	1023.4	1022.7
150°	1053.4	1054.7	1056.1	1057.4	1058.7	1059.4	1059.4	1059.4	1059.4	1059.4	1059.0
152.5°	1088.4	1089.5	1090.6	1091.7	1092.9	1093.2	1092.7	1092.3	1091.9	1091.4	1091.2
155°	1119.4	1121.0	1122.5	1124.1	1125.6	1126.0	1125.1	1124.2	1123.3	1122.4	1122.2
157.5°	1148.4	1149.8	1151.1	1152.4	1153.8	1154.0	1153.1	1152.2	1151.3	1150.4	1150.2
160°	1176.4	1177.3	1178.2	1179.1	1180.0	1179.9	1178.8	1177.7	1176.6	1175.4	1175.4
162.5°	1197.5	1199.0	1200.6	1202.1	1203.7	1203.9	1202.8	1201.7	1200.6	1199.5	1199.2
165°	1217.5	1219.0	1220.6	1222.1	1223.7	1223.8	1222.5	1221.1	1219.8	1218.5	1218.5
167.5°	1235.5	1236.8	1238.1	1239.5	1240.8	1240.8	1239.5	1238.1	1236.8	1235.5	1235.2
170°	1248.5	1250.0	1251.6	1253.1	1254.7	1254.7	1253.1	1251.6	1250.0	1248.5	1248.5
172.5°	1258.5	1260.0	1261.6	1263.1	1264.7	1264.8	1263.5	1262.1	1260.8	1259.5	1259.5
175°	1265.5	1267.0	1268.6	1270.1	1271.7	1271.8	1270.5	1269.1	1267.8	1266.5	1266.5
177.5°	1269.5	1271.0	1272.6	1274.1	1275.7	1275.8	1274.5	1273.1	1271.8	1270.5	1270.5
180°	1273.5	1273.5	1273.5	1273.5	1273.5	1273.5	1273.5	1273.5	1273.5	1273.5	1273.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2469.3	2469.3	2469.3	2469.3	2469.3	2469.3	2469.3	2469.3	2469.3	2469.3	2469.3
2.5°	2641.1	2634.3	2609.1	2583.8	2555.2	2526.6	2505.4	2484.2	2452.7	2421.1	2395.4
5°	2862.3	2830.2	2776.9	2723.6	2651.5	2579.3	2530.6	2481.9	2416.6	2351.2	2299.1
7.5°	3037.6	2982.6	2908.1	2833.6	2739.1	2644.6	2555.2	2465.8	2366.1	2266.5	2185.1
10°	3149.3	3112.1	3026.1	2940.2	2813.6	2687.0	2562.1	2437.2	2308.8	2180.5	2072.8
12.5°	3160.2	3163.6	3084.6	3005.5	2862.3	2719.1	2567.2	2415.4	2253.8	2092.3	1966.8
15°	3064.5	3123.5	3080.0	3036.5	2892.1	2747.7	2560.9	2374.2	2188.0	2001.8	1856.8
17.5°	2886.9	3013.5	3019.8	3026.1	2881.8	2737.4	2530.6	2323.7	2112.9	1902.1	1749.7
20°	2644.6	2831.3	2895.5	2959.7	2842.2	2724.8	2502.5	2280.2	2044.2	1808.1	1648.3
22.5°	2397.1	2624.0	2741.4	2858.8	2771.8	2684.7	2448.1	2211.5	1962.2	1713.0	1550.9
25°	2115.2	2362.7	2543.2	2723.6	2670.4	2617.1	2383.9	2150.7	1885.5	1620.2	1454.6
27.5°	1869.4	2120.9	2338.6	2556.3	2544.9	2533.4	2302.0	2070.5	1799.0	1527.4	1367.5
30°	1650.6	1884.9	2128.4	2371.9	2399.9	2428.0	2204.6	1981.1	1709.0	1436.9	1282.8
32.5°	1456.9	1661.5	1922.7	2184.0	2239.0	2294.0	2092.3	1890.6	1621.4	1352.1	1203.7
35°	1298.2	1483.9	1745.1	2006.3	2075.1	2143.8	1968.5	1793.2	1530.8	1268.4	1126.9
37.5°	1157.9	1313.1	1568.1	1823.0	1907.2	1991.5	1834.5	1677.5	1431.7	1185.9	1055.9
40°	1041.6	1166.5	1400.8	1635.1	1732.5	1829.9	1700.4	1570.9	1337.8	1104.6	984.8
42.5°	944.2	1055.3	1267.9	1480.4	1573.8	1667.2	1557.8	1448.3	1240.9	1033.5	924.1
45°	861.1	949.9	1143.0	1336.0	1424.8	1513.6	1419.7	1325.7	1143.0	960.2	858.2
47.5°	783.2	859.4	1024.4	1189.4	1268.4	1347.5	1274.2	1200.8	1046.1	891.5	799.2
50°	713.3	774.6	919.0	1063.3	1132.1	1200.8	1136.1	1071.4	944.2	817.0	736.8
52.5°	652.6	702.4	823.3	944.2	1003.2	1062.2	1006.6	951.0	850.2	749.4	679.5
55°	592.4	634.8	739.6	844.5	884.6	924.7	881.7	838.7	757.4	676.0	617.0
57.5°	536.2	574.1	660.0	745.9	776.9	807.8	768.9	729.9	668.6	607.3	558.0
60°	481.2	512.2	583.8	655.4	674.3	693.2	661.7	630.2	587.2	544.3	500.2
62.5°	430.3	458.3	511.6	564.9	577.5	590.1	566.0	542.0	509.3	476.7	442.3
65°	377.6	398.7	442.3	485.8	493.9	501.9	480.7	459.5	434.8	410.2	385.0
67.5°	328.9	343.7	379.3	414.8	415.4	415.9	398.7	381.6	367.8	354.1	334.0
70°	281.3	295.6	319.1	342.6	343.2	343.7	330.0	316.2	305.9	295.6	280.7
72.5°	232.6	242.9	260.7	278.4	277.3	276.1	267.6	259.0	250.9	242.9	232.0
75°	188.5	197.1	209.1	221.1	217.7	214.3	209.7	205.1	198.2	191.4	184.5
77.5°	148.4	153.5	160.4	167.3	165.0	162.7	158.7	154.7	149.5	144.4	141.5
80°	108.9	111.1	115.7	120.3	119.2	118.0	113.4	108.9	107.7	106.6	102.6
82.5°	73.9	76.8	77.9	79.1	78.5	77.9	74.5	71.0	69.9	68.7	68.2
85°	44.1	44.7	45.3	45.8	44.1	42.4	41.2	40.1	40.1	40.1	39.5
87.5°	20.1	20.6	20.6	20.6	20.1	19.5	18.3	17.2	17.8	18.3	18.3
90°	18.2	15.3	12.4	9.9	7.7	5.4	3.2	1.0	3.2	5.4	7.7
92.5°	39.3	38.0	36.7	35.3	34.0	32.7	31.3	30.0	31.3	32.7	34.0
95°	70.5	68.7	66.9	65.2	63.7	62.1	60.6	59.0	60.6	62.1	63.7
97.5°	105.4	104.0	102.7	101.5	100.4	99.3	98.1	97.0	98.1	99.3	100.4
100°	144.8	143.7	142.6	141.4	140.1	138.7	137.4	136.1	137.4	138.7	140.1
102.5°	188.0	186.4	184.8	183.7	183.1	182.4	181.7	181.1	181.7	182.4	183.1
105°	232.1	230.1	228.1	226.9	226.4	226.0	225.5	225.1	225.5	226.0	226.4
107.5°	280.3	279.4	278.5	278.0	277.8	277.5	277.3	277.1	277.3	277.5	277.8
110°	328.2	327.8	327.3	326.9	326.5	326.0	325.6	325.1	325.6	326.0	326.5



TEST NUMBER: P831091

CATALOG NUMBER: S123DIP-S1000D1195U935-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	376.1	376.1	376.1	376.0	375.8	375.6	375.4	375.1	375.4	375.6	375.8
115°	427.1	427.5	427.9	427.8	427.2	426.5	425.8	425.2	425.8	426.5	427.2
117.5°	476.1	476.5	477.0	477.1	476.8	476.6	476.4	476.2	476.4	476.6	476.8
120°	526.4	527.5	528.6	528.5	527.2	525.9	524.5	523.2	524.5	525.9	527.2
122.5°	575.1	575.6	576.0	575.8	574.9	574.0	573.1	572.2	573.1	574.0	574.9
125°	624.1	624.6	625.0	624.9	624.2	623.6	622.9	622.2	622.9	623.6	624.2
127.5°	673.1	673.6	674.0	673.6	672.3	670.9	669.6	668.3	669.6	670.9	672.3
130°	720.6	721.3	721.9	721.4	719.6	717.8	716.0	714.3	716.0	717.8	719.6
132.5°	767.2	767.6	768.1	767.4	765.6	763.8	762.1	760.3	762.1	763.8	765.6
135°	812.8	813.0	813.2	812.6	811.3	810.0	808.6	807.3	808.6	810.0	811.3
137.5°	857.0	856.3	855.7	854.8	853.7	852.5	851.4	850.3	851.4	852.5	853.7
140°	900.9	900.7	900.5	899.8	898.7	897.6	896.4	895.3	896.4	897.6	898.7
142.5°	942.5	942.0	941.6	940.8	939.7	938.6	937.5	936.4	937.5	938.6	939.7
145°	983.0	982.4	981.7	981.1	980.7	980.3	979.8	979.4	979.8	980.3	980.7
147.5°	1022.1	1021.4	1020.7	1019.9	1019.1	1018.2	1017.3	1016.4	1017.3	1018.2	1019.1
150°	1058.5	1058.1	1057.6	1057.2	1056.7	1056.3	1055.8	1055.4	1055.8	1056.3	1056.7
152.5°	1091.0	1090.7	1090.5	1090.1	1089.4	1088.7	1088.1	1087.4	1088.1	1088.7	1089.4
155°	1122.0	1121.8	1121.5	1121.4	1121.4	1121.4	1121.4	1121.4	1121.4	1121.4	1121.4
157.5°	1150.0	1149.8	1149.5	1149.5	1149.8	1150.0	1150.2	1150.4	1150.2	1150.0	1149.8
160°	1175.4	1175.4	1175.4	1175.7	1176.1	1176.6	1177.0	1177.4	1177.0	1176.6	1176.1
162.5°	1199.0	1198.8	1198.6	1198.8	1199.5	1200.1	1200.8	1201.5	1200.8	1200.1	1199.5
165°	1218.5	1218.5	1218.5	1218.8	1219.5	1220.1	1220.8	1221.5	1220.8	1220.1	1219.5
167.5°	1235.0	1234.8	1234.6	1234.9	1235.8	1236.7	1237.6	1238.5	1237.6	1236.7	1235.8
170°	1248.5	1248.5	1248.5	1248.9	1249.8	1250.7	1251.6	1252.5	1251.6	1250.7	1249.8
172.5°	1259.5	1259.5	1259.5	1259.9	1260.8	1261.7	1262.6	1263.5	1262.6	1261.7	1260.8
175°	1266.5	1266.5	1266.5	1266.9	1267.8	1268.7	1269.6	1270.5	1269.6	1268.7	1267.8
177.5°	1270.5	1270.5	1270.5	1270.9	1271.8	1272.7	1273.6	1274.5	1273.6	1272.7	1271.8
180°	1273.5	1273.5	1273.5	1273.5	1273.5	1273.5	1273.5	1273.5	1273.5	1273.5	1273.5



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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2469.3	2469.3	2469.3	2469.3	2469.3	2469.3	2469.3	2469.3	2469.3	2469.3	2469.3
2.5°	2369.6	2347.2	2324.9	2307.7	2290.5	2261.3	2232.1	2225.2	2218.3	2208.6	2198.8
5°	2247.0	2192.0	2137.0	2087.7	2038.4	2000.0	1961.7	1936.5	1911.2	1892.9	1874.6
7.5°	2103.7	2021.2	1938.7	1880.3	1821.9	1766.3	1710.7	1693.0	1675.2	1651.1	1627.1
10°	1965.1	1874.0	1782.9	1706.7	1630.5	1576.1	1521.7	1499.9	1478.1	1447.8	1417.4
12.5°	1841.4	1741.7	1642.0	1565.2	1488.4	1435.7	1383.0	1351.5	1320.0	1302.8	1285.6
15°	1711.9	1605.3	1498.7	1427.7	1356.7	1309.1	1261.6	1234.1	1206.6	1189.9	1173.3
17.5°	1597.3	1491.9	1386.5	1318.3	1250.1	1206.6	1163.0	1139.0	1114.9	1102.3	1089.7
20°	1488.4	1385.3	1282.2	1215.7	1149.3	1113.7	1078.2	1062.8	1047.3	1037.0	1026.7
22.5°	1388.7	1287.3	1185.9	1129.2	1072.5	1043.9	1015.2	1004.3	993.4	984.8	976.2
25°	1289.1	1198.5	1108.0	1059.9	1011.8	988.3	964.8	953.9	943.0	934.4	925.8
27.5°	1207.7	1121.2	1034.7	993.4	952.2	933.9	915.5	906.9	898.3	890.3	882.3
30°	1128.6	1051.3	974.0	938.4	902.9	886.3	869.7	861.1	852.5	845.1	837.6
32.5°	1055.3	988.9	922.4	889.7	857.1	843.3	829.6	819.3	809.0	803.2	797.5
35°	985.4	925.8	866.2	839.3	812.4	798.6	784.9	776.3	767.7	763.1	758.5
37.5°	925.8	872.6	819.3	793.5	767.7	754.5	741.4	733.9	726.5	724.7	723.0
40°	865.1	819.3	773.4	748.2	723.0	711.6	700.1	695.5	690.9	689.8	688.6
42.5°	814.7	770.0	725.3	702.4	679.5	669.7	660.0	657.7	655.4	657.1	658.9
45°	756.2	719.0	681.8	660.6	639.4	631.4	623.3	621.6	619.9	623.3	626.8
47.5°	707.0	672.6	638.2	618.2	598.1	592.4	586.7	586.1	585.5	590.1	594.7
50°	656.6	623.3	590.1	574.1	558.0	552.9	547.7	549.4	551.1	558.6	566.0
52.5°	609.6	578.6	547.7	532.8	517.9	514.5	511.0	515.1	519.1	527.1	535.1
55°	558.0	529.9	501.9	490.4	479.0	475.5	472.1	480.1	488.1	495.6	503.0
57.5°	508.7	484.1	459.5	449.2	438.9	438.3	437.7	445.2	452.6	460.6	468.6
60°	456.0	435.4	414.8	406.8	398.7	399.9	401.0	409.6	418.2	424.5	430.8
62.5°	407.9	390.7	373.5	366.1	358.6	361.5	364.4	373.0	381.6	389.0	396.5
65°	359.8	345.5	331.1	326.0	320.8	324.8	328.9	336.3	343.7	348.9	354.1
67.5°	314.0	301.9	289.9	285.9	281.9	285.9	289.9	297.3	304.8	309.9	315.1
70°	265.8	256.1	246.4	243.5	240.6	245.2	249.8	256.1	262.4	267.6	272.7
72.5°	221.1	213.7	206.2	205.7	205.1	209.1	213.1	219.4	225.7	229.2	232.6
75°	177.6	173.6	169.6	169.0	168.4	172.4	176.5	179.9	183.3	186.2	189.1
77.5°	138.6	135.2	131.8	132.3	132.9	135.8	138.6	142.1	145.5	147.2	149.0
80°	98.5	97.4	96.2	97.4	98.5	100.8	103.1	105.4	107.7	108.9	110.0
82.5°	67.6	66.5	65.3	67.0	68.7	70.5	72.2	73.9	75.6	76.2	76.8
85°	39.0	40.7	42.4	42.4	42.4	43.0	43.5	44.1	44.7	44.1	43.5
87.5°	18.3	18.9	19.5	19.5	19.5	20.1	20.6	20.6	20.6	20.1	19.5
90°	9.9	12.4	15.3	18.2	21.1	24.0	24.9	25.8	26.7	27.6	28.2
92.5°	35.3	36.7	38.0	39.3	40.7	42.0	42.7	43.3	44.0	44.7	44.8
95°	65.2	66.9	68.7	70.5	72.2	74.0	74.9	75.8	76.7	77.6	78.0
97.5°	101.5	102.7	104.0	105.4	106.7	108.0	109.2	110.3	111.4	112.5	112.9
100°	141.4	142.6	143.7	144.8	145.9	147.1	147.7	148.4	149.1	149.7	150.3
102.5°	183.7	184.8	186.4	188.0	189.5	191.1	191.7	192.4	193.1	193.7	194.0
105°	226.9	228.1	230.1	232.1	234.1	236.1	236.1	236.1	236.1	236.1	236.3
107.5°	278.0	278.5	279.4	280.3	281.2	282.1	282.8	283.4	284.1	284.8	285.0
110°	326.9	327.3	327.8	328.2	328.7	329.1	330.0	330.9	331.8	332.7	332.9



TEST NUMBER: P831091

CATALOG NUMBER: S123DIP-S1000D1195U935-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	376.0	376.1	376.1	376.1	376.1	376.1	377.3	378.4	379.5	380.6	381.1
115°	427.8	427.9	427.5	427.1	426.6	426.2	426.4	426.6	426.8	427.1	427.1
117.5°	477.1	477.0	476.5	476.1	475.6	475.2	475.2	475.2	475.2	475.2	474.8
120°	528.5	528.6	527.5	526.4	525.3	524.2	524.0	523.8	523.5	523.3	523.0
122.5°	575.8	576.0	575.6	575.1	574.7	574.2	573.5	572.9	572.2	571.5	570.9
125°	624.9	625.0	624.6	624.1	623.7	623.2	622.3	621.5	620.6	619.7	618.8
127.5°	673.6	674.0	673.6	673.1	672.7	672.3	670.9	669.6	668.3	666.9	665.8
130°	721.4	721.9	721.3	720.6	719.9	719.3	718.4	717.5	716.6	715.7	714.5
132.5°	767.4	768.1	767.6	767.2	766.7	766.3	765.2	764.1	763.0	761.8	760.7
135°	812.6	813.2	813.0	812.8	812.5	812.3	811.4	810.5	809.6	808.7	808.1
137.5°	854.8	855.7	856.3	857.0	857.7	858.3	857.2	856.1	855.0	853.9	853.0
140°	899.8	900.5	900.7	900.9	901.1	901.3	901.1	900.9	900.7	900.5	899.6
142.5°	940.8	941.6	942.0	942.5	942.9	943.4	943.1	942.9	942.7	942.5	941.8
145°	981.1	981.7	982.4	983.0	983.7	984.4	984.1	983.9	983.7	983.5	982.9
147.5°	1019.9	1020.7	1021.4	1022.1	1022.7	1023.4	1023.4	1023.4	1023.4	1023.4	1022.7
150°	1057.2	1057.6	1058.1	1058.5	1059.0	1059.4	1059.4	1059.4	1059.4	1059.4	1058.7
152.5°	1090.1	1090.5	1090.7	1091.0	1091.2	1091.4	1091.9	1092.3	1092.7	1093.2	1092.9
155°	1121.4	1121.5	1121.8	1122.0	1122.2	1122.4	1123.3	1124.2	1125.1	1126.0	1125.6
157.5°	1149.5	1149.5	1149.8	1150.0	1150.2	1150.4	1151.3	1152.2	1153.1	1154.0	1153.8
160°	1175.7	1175.4	1175.4	1175.4	1175.4	1175.4	1176.6	1177.7	1178.8	1179.9	1180.0
162.5°	1198.8	1198.6	1198.8	1199.0	1199.2	1199.5	1200.6	1201.7	1202.8	1203.9	1203.7
165°	1218.8	1218.5	1218.5	1218.5	1218.5	1218.5	1219.8	1221.1	1222.5	1223.8	1223.7
167.5°	1234.9	1234.6	1234.8	1235.0	1235.2	1235.5	1236.8	1238.1	1239.5	1240.8	1240.8
170°	1248.9	1248.5	1248.5	1248.5	1248.5	1248.5	1250.0	1251.6	1253.1	1254.7	1254.7
172.5°	1259.9	1259.5	1259.5	1259.5	1259.5	1259.5	1260.8	1262.1	1263.5	1264.8	1264.7
175°	1266.9	1266.5	1266.5	1266.5	1266.5	1266.5	1267.8	1269.1	1270.5	1271.8	1271.7
177.5°	1270.9	1270.5	1270.5	1270.5	1270.5	1270.5	1271.8	1273.1	1274.5	1275.8	1275.7
180°	1273.5	1273.5	1273.5	1273.5	1273.5	1273.5	1273.5	1273.5	1273.5	1273.5	1273.5



TEST NUMBER: P831091

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CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	2469.3	2469.3	2469.3	2469.3
2.5°	2194.8	2190.8	2174.8	2158.7
5°	1860.8	1847.1	1842.5	1837.9
7.5°	1625.9	1624.8	1600.7	1576.7
10°	1419.1	1420.8	1399.1	1377.3
12.5°	1271.3	1257.0	1255.3	1253.5
15°	1160.2	1147.0	1144.7	1142.4
17.5°	1081.7	1073.6	1071.4	1069.1
20°	1022.1	1017.5	1013.5	1009.5
22.5°	970.5	964.8	961.4	957.9
25°	920.7	915.5	914.4	913.2
27.5°	876.0	869.7	869.7	869.7
30°	833.6	829.6	827.9	826.1
32.5°	794.1	790.6	790.6	790.6
35°	756.8	755.1	752.8	750.5
37.5°	723.0	723.0	721.9	720.7
40°	690.4	692.1	692.1	692.1
42.5°	660.6	662.3	662.3	662.3
45°	629.6	632.5	633.6	634.8
47.5°	599.3	603.9	605.0	606.1
50°	569.5	572.9	573.5	574.1
52.5°	539.1	543.1	546.0	548.9
55°	507.0	511.0	512.8	514.5
57.5°	472.7	476.7	477.2	477.8
60°	434.8	438.9	440.0	441.1
62.5°	398.7	401.0	402.2	403.3
65°	357.5	360.9	363.2	365.5
67.5°	318.0	320.8	320.8	320.8
70°	273.9	275.0	276.7	278.4
72.5°	233.2	233.7	233.7	233.7
75°	190.2	191.4	191.9	192.5
77.5°	149.5	150.1	150.1	150.1
80°	109.4	108.9	108.9	108.9
82.5°	75.1	73.3	73.3	73.3
85°	43.0	42.4	43.0	43.5
87.5°	19.5	19.5	19.5	19.5
90°	28.7	29.1	29.6	30.0
92.5°	44.4	43.9	43.5	43.0
95°	78.0	78.0	78.0	78.0
97.5°	112.7	112.5	112.3	112.0
100°	150.7	151.2	151.6	152.1
102.5°	193.7	193.5	193.3	193.1
105°	236.8	237.2	237.6	238.1
107.5°	284.8	284.6	284.3	284.1
110°	332.5	332.0	331.6	331.1



TEST NUMBER: P831091

CATALOG NUMBER: S123DIP-S1000D1195U935-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	381.1	381.1	381.1	381.1
115°	426.8	426.6	426.4	426.2
117.5°	474.2	473.5	472.8	472.2
120°	522.5	522.1	521.6	521.2
122.5°	570.2	569.5	568.9	568.2
125°	617.9	617.0	616.1	615.2
127.5°	664.9	664.0	663.1	662.2
130°	712.9	711.4	709.8	708.3
132.5°	759.6	758.5	757.4	756.3
135°	807.6	807.2	806.7	806.3
137.5°	852.3	851.7	851.0	850.3
140°	898.0	896.4	894.9	893.3
142.5°	940.7	939.6	938.5	937.4
145°	982.0	981.1	980.3	979.4
147.5°	1021.4	1020.1	1018.7	1017.4
150°	1057.4	1056.1	1054.7	1053.4
152.5°	1091.7	1090.6	1089.5	1088.4
155°	1124.1	1122.5	1121.0	1119.4
157.5°	1152.4	1151.1	1149.8	1148.4
160°	1179.1	1178.2	1177.3	1176.4
162.5°	1202.1	1200.6	1199.0	1197.5
165°	1222.1	1220.6	1219.0	1217.5
167.5°	1239.5	1238.1	1236.8	1235.5
170°	1253.1	1251.6	1250.0	1248.5
172.5°	1263.1	1261.6	1260.0	1258.5
175°	1270.1	1268.6	1267.0	1265.5
177.5°	1274.1	1272.6	1271.0	1269.5
180°	1273.5	1273.5	1273.5	1273.5



TEST NUMBER: P831091

CATALOG NUMBER: S123DIP-S1000D1195U935-4F0-1E-UDD-G1

CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	15.24	16.09	16.18	17.04	18.27	17.47	18.32	18.41	19.27	20.50
	3H	16.88	17.64	17.83	18.60	19.86	18.90	19.66	19.85	20.62	21.87
	4H	17.46	18.18	18.43	19.14	20.41	19.35	20.07	20.31	21.03	22.29
	6H	17.83	18.49	18.81	19.46	20.74	19.62	20.28	20.60	21.25	22.53
	8H	17.93	18.56	18.91	19.54	20.82	19.68	20.31	20.67	21.30	22.57
	12H	17.97	18.57	18.96	19.55	20.85	19.70	20.30	20.69	21.28	22.58
4H	2H	15.81	16.53	16.78	17.49	18.76	17.64	18.35	18.61	19.32	20.58
	3H	17.64	18.24	18.62	19.23	20.51	19.25	19.85	20.23	20.85	22.12
	4H	18.34	18.88	19.32	19.87	21.17	19.84	20.38	20.82	21.37	22.67
	6H	18.81	19.28	19.81	20.29	21.59	20.24	20.71	21.24	21.72	23.02
	8H	18.95	19.39	19.95	20.39	21.70	20.35	20.79	21.35	21.80	23.11
	12H	19.01	19.41	20.03	20.43	21.75	20.40	20.79	21.42	21.81	23.13
8H	4H	18.60	19.04	19.60	20.04	21.36	19.94	20.38	20.94	21.38	22.70
	6H	19.19	19.55	20.22	20.60	21.91	20.44	20.81	21.47	21.85	23.16
	8H	19.40	19.72	20.43	20.75	22.08	20.62	20.94	21.66	21.97	23.31
	12H	19.52	19.80	20.56	20.83	22.20	20.72	21.00	21.76	22.03	23.41
12H	4H	18.60	19.00	19.62	20.02	21.34	19.92	20.31	20.94	21.33	22.65
	6H	19.24	19.56	20.27	20.59	21.92	20.46	20.78	21.49	21.81	23.14
	8H	19.47	19.75	20.51	20.78	22.16	20.66	20.94	21.69	21.96	23.34